# The Vicious Circles of Neurasthenia and their Treatment

J. B. HURRY

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# The Vicious Circles of Neurasthenia and their Treatment

# The Vicious Circles of Neurasthenia and their Treatment

BY

JAMIESON B. HURRY, M.A., M.D. (Cantab.)

Author of "Vicious Circles in Disease"

With Illustrations

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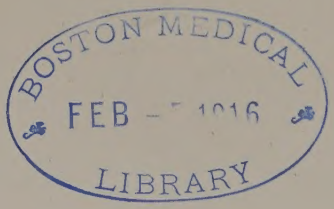

*"I began to think whether there might not be a motion, as it were, in a Circle. Now this I afterwards found to be true."*

HARVEY.

# Preface

N a Volume entitled VICIOUS CIRCLES IN DISEASE published some years ago the Author drew attention to the important part played by the Vicious Circle in pathology, and shewed how a study of this morbid process contributed to the diagnosis, prognosis and treatment of disease.

The extensive field covered by that Volume only allowed of a superficial survey of the subject, and individual disorders received but cursory notice. In this work an attempt is made to trace the influence of the Circle in detail throughout a single disorder, a method which will emphasize the wide-spread influence of this self-perpetuating and self-aggravating condition. The two Volumes are therefore complementary one to the other.

In order to guard against any possible charge of "obsession" in reference to the *rôle* of the Circle, references to standard authorities have been freely introduced. Such independent testimony will carry greater weight than any individual opinion would be entitled to.

Dr. Harry Campbell has kindly read through the proof-sheets.

WESTFIELD,
READING.

J. B. H.

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# Introduction

EURASTHENIA is the most protean and ubiquitous of disorders, and therefore the most difficult of description. Perhaps it may best be defined as a chronic functional disorder due to exhaustion of the neurons, usually associated with impaired ideation.

In some cases many neurons are affected; in others the neurons of certain areas suffer predominantly. Hence the infinite variety in the manifestations of the malady. There may be a slight local weakness, or complete exhaustion of the entire nervous system.

The chronic and progressive character of neurasthenia is due to the establishment of Vicious Circles. In this more than in any other disorder do the symptoms react on the primary condition in such manner that the morbid process is intensified and perpetuated.

As Campbell Smith says:

> "In no complaint does it happen more frequently that the patient gets into a Vicious Circle, the fundamental disorder producing symptoms which again maintain and aggravate the disease." [1]

---

[1] Ballet, Neurasthenia, tr. by C. Smith, 3rd Ed., p. xxvi.

In order that a disorder may be rapidly cured, its reactions, *e.g.* cough, expectoration, perspiration, diarrhœa, vomiting, pyrexia, dyspnœa, etc., must relieve the primary condition. Such disorders may be described as self-terminating.

In neurasthenia there are also beneficent protective reactions, such as a sense of fatigue and increased irritability, calling for rest, sleep and a diminished output of mental and physical energy, and bringing neurasthenia into line with other disorders whose early reactions are beneficent.

This protective stage, however, is but of short duration and is apt to be overlooked or neglected. The further manifestations, even if protective in purpose, as a matter of fact aggravate the condition of exhaustion and irritability of the neurons. Indeed the number and prominence of such injurious reactions make neurasthenia appear to be a self-perpetuating disorder. Its Vicious Circles constitute a striking characteristic.

In strategy a knowledge of the strength, nature and disposition of the hostile forces is of primary importance, and every effort is made for their accurate determination and localization. The morbid process known as the Circle constitutes

such a hostile force in pathology, and the more clearly it is recognised and localized the greater the prospect of successful treatment. This alone is a sufficient justification for the following study.

Some diagrammatic Illustrations will, it is hoped, assist in the visualization of the Circle.[1] *Ex visu memoria tenacior.*

[1] Although the expression Vicious Circle is too ancient to be discarded, "vicious spiral" would in some respects be more exact. The process may then be visualized by the diagram of a spiral in which the successive loops represent the increment of the several factors.

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# Chapter One

## THE PATHOLOGY OF NEURASTHENIA

THE pathology of neurasthenia is in large measure wrapped in obscurity. Nevertheless research has yielded some fruitful results which enable us to formulate theoretical considerations corresponding with clinical phenomena.

The two dominant conditions of neurasthenia are the morbid irritability and fatiguability of the nervous system. It is the province of pathology to explain these conditions which have been studied by Verworn, Binswanger, Goldscheider and others. Their conclusions may be briefly summarised and attention drawn to the Circles to which the phenomena are due.

In the case of healthy neurons, functional activity produces changes which disturb what Verworn terms the "equilibrium of metabolism." This disturbance in its turn provokes reactions which restore the previous equilibrium. Thus there is a self-regulating mechanism of repair which preserves intact the functional activity of the neurons. Dissimilation is made good by equivalent assimilation.

In certain congenital and acquired conditions, on the other hand, this process of repair is either retarded or permanently weakened. The neurons

persist in a condition of exhaustion and irritability, which inhibits or paralyzes the mechanism of repair.

Verworn,[1] as a result of experiments on the nervous system of the frog, has formulated a theory to account for these phenomena. According to him, the diminished irritability of healthy neurons which results from functional activity may be due (a) to the accumulation of certain fatigue-substances derived from the processes of metabolism, (b) to the consumption of the available oxygen, and (c) to the wastage of those nutrient materials which are the potential sources of further activity. Although all three processes have a similar result inasmuch as they all check continued functional activity, yet the causal factors are so different that distinguishing terms are desirable. Verworn applies the term *fatigue* to the phenomena arising from the accumulation of decomposition products, and *exhaustion* to the phenomena arising from the consumption of the necessary oxygen and nutrient substances.[2]

The first condition is that associated with such expenditure of energy as brings on the well-known sense of fatigue which is readily remedied by the

[1] *Berliner Klinische Wochenschrift*, 1901, p. 125.

[2] General Physiology, tr. by Lee, p. 469. Dr. Harry Campbell prefers the terms "fatigue paralysis" and "exhaustion paralysis." *Lancet*, 1912, Vol. II., p. 403.

self-regulating mechanism by which Nature removes the accumulated products of metabolism. That mechanism acts most rapidly during sleep, when the muscular system is relaxed and the sense-organs are freed from the constant stimulation of the activities of daily life.

On the other hand, the severe exhaustion that results from hard labour, and the chronic condition of exhaustion as seen in neurasthenia are as a general rule due to an insufficient supply of oxygen. The supply of nutrient materials stored up in the neurons usually lasts much longer and can only be artificially used up if it is withdrawn from the living neurons by a continual supply of oxygen.

Such a condition may be brought about when some unusual demands are made on the irritability of the neurons, when the processes of dissimilation greatly exceed those of assimilation. The result is increased irritability of the neurons and paralysis of the machinery of repair.

Binswanger[1] explains the phenomena somewhat differently. In his view there is in neurasthenia a disturbance of the mechanism governing the processes of synthesis and the liberation of energy. Thus stimuli which under normal circumstances would be subliminal, may suffice in neurasthenia to liberate kinetic energy, the conditions some-

[1] Pathologie und Therapie der Neurasthenie, pp. 21 ff.

what resembling those brought about by strychnine poisoning. In other words, the impaired formation of synthetic products in the neurons diminishes their normal control over the oxydation processes and the associated liberation of energy.

Hence we meet with increased and accelerated discharges of energy, in fact such discharges as correspond clinically with the phenomena of increased irritability in neurasthenia.

This theory also attributes the exhaustibility of the neurons to the impaired supply of synthetic products which are the potential sources of energy.

An important Circle is established, which Binswanger thus describes :

> "The Vicious Circle that is established by these pathological processes has a most injurious influence on the vigour of the patient. On the one hand the reserve of potential nutriment (Arbeitsvorrat) is lessened ; hence any stimuli that reach the neurons cause a more rapid and greater liberation of kinetic energy. A larger proportion of "irritation work" (Erregungsarbeit) is performed and thus the supply of available nutriment is more rapidly consumed. But on the other hand the power of doing negative work is diminished, *i.e.* the storage of potential nutriment takes place more slowly and less satisfactorily. The final result is a complete collapse of the power of work." [1]

[1] Binswanger, Pathologie und Therapie der Neurasthenie, p. 23. By "irritation work" Binswanger means energy liberated as a direct result of stimulation. "Negative work" means the replenishing of the reserves of potential nutriment, ready to be converted into kinetic energy.

Binswanger compares a neurasthenic individual to a spendthrift who, regardless of the future, is continually drawing heavily on his capital, without effort at replacement. At last his capital is exhausted and bankruptcy results. On the other hand the physiological regulation of work in a healthy individual may be compared to the financial management of a prudent man, who regulates his expenditure according to his income, and replenishes his capital by means of special economies, whenever unusual drafts are made on it.

Further light is thrown on the pathology of neurasthenia by Goldscheider's studies of the alterations of the liminal intensity of stimuli required to excite sensory or motor reactions. He finds that there is a lowering of the "neuron-threshold" in neurasthenia, in consequence of which there is an increased response to a given stimulus. In other words, such a stimulus acts more readily and more vigorously, becoming relatively if not actually stronger, and the result is further weakening. Thus the increased irritability and exhaustibility react on each other.

This Circle is complicated by the addition of the psychical function of attention which is so readily associated with hyperæsthesia. Indeed there is a reciprocal relation between hyperæsthesia and attention, since the abnormal sensations associated with hyperæsthesia readily direct

the attention of the sufferer to the affected region, while on the other hand, according to the well-known psychological principle, attention aggravates hyperæsthesia.

> "Attention increases sensitiveness and at the same time lowers the 'neuron-threshhold.'" [1]

Goldscheider thus describes the Circle :

> "The reciprocal relations between hyperæsthesia and attention explain why hyperæsthesia so readily affects the emotional condition. For hyperæsthesia attracts the attention of the sufferer and is then increased by the very fact that attention is more closely directed to the seat of discomfort. Thus in the absence of some powerful inhibitory process, a Vicious Circle is created by which the hyperæsthesia may be aggravated and reach a high degree of severity." [2]

The Circle may also be stated in this way :

> "A highly injurious Vicious Circle is formed as a result of the increased irritability due to exaggerated functional activity in neurasthenia. For the greater the irritability and the more the patient's attention is directed to his abnormal sensations, the more easily are sensations aroused. In other words the more do the neurons get weakened and the greater the nervous exhaustion of the patient." [3]

These considerations throw light on the clinical phenomena of neurasthenia and have direct bearings on treatment.

---

[1] Goldscheider, Die Bedeutung der Reize, p. 23.

[2] Die Bedeutung der Reize, p. 24.

[3] Lewandowsky, Handbuch der Neurologie, Vol. V. (iv.), p. 610.

# Chapter Two

## CIRCLES ASSOCIATED WITH PSYCHOSES

TO this Group belong Circles in which the reciprocal reactions are psychical, *i.e.* uncomplicated by physical manifestations.

As already pointed out, a dominant characteristic of neurasthenia is a chronic exhaustion of the neurons associated with morbid ideation. This disordered ideation in its turn aggravates the exhaustion (Plate I. a).

There are many manifestations of perverted ideation in which reciprocal correlations may be established. Four typical conditions will serve as illustrations : (a) phobias ; (b) mental depression ; (c) anorexia nervosa ; (d) insomnia.

### (a) Phobias

Perverted ideation frequently gives rise to phobias which haunt the victim and depress his vitality (Plate I. b). Such phobias occur in endless variety and are associated with loss of self-

control and with auto-suggestions which react on the primary disorder. Every phobia intensifies its own cause.

Binswanger describes the Circle :

> " The execution of any physical or mental task, which on previous occasions had brought on attacks of severe exhaustion and other symptoms associated with it, . . . may re-awaken an imaginary phobia of a similar attack of exhaustion either at the commencement or during the execution of the task. Such a phobia may then excite a series of abnormal sensations which in their turn provide fresh food for the phobias, and intensify their influence on the emotional condition. This Vicious Circle may even culminate in a dread of death, *i.e.* in the imaginary cessation of all vital functions." [1]

Dubois also refers to the condition :

> " In neurasthenia one must take into account the real fatigue of the nervous centres which on the one hand results directly from morbid states of mind, and, on the other, furnishes new food for auto-suggestions. Here we have the eternal Vicious Circle in which the neuroses travel. Their real ills give birth to their fears and their phobias, and, on the other hand, their mental representations of a pessimistic nature create new disorders." [2]

A complete loss of will power is highly characteristic of this form of neurasthenia.

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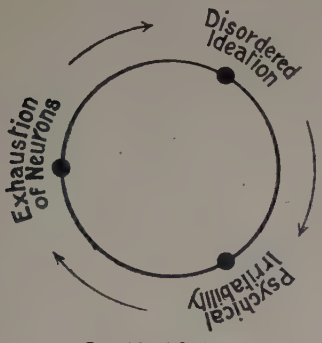
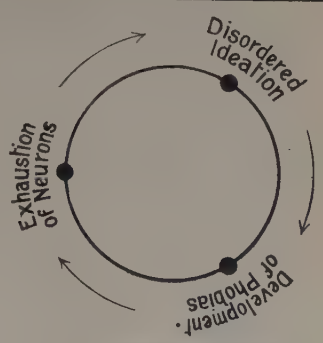
[1] Pathologie und Therapie der Neurasthenie, p. 135.

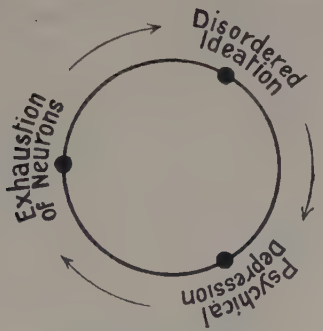
[2] Psychic Treatment of Nervous Disorders, tr. by Jeliffe and White, p. 180.



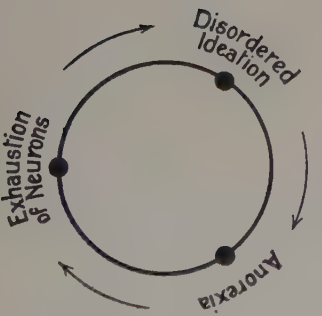

(a) Psychical Irritability



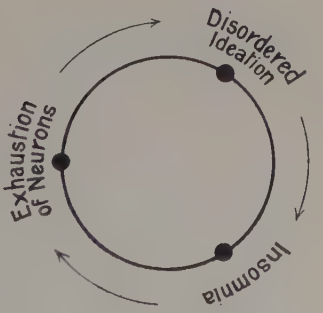

(b) Development of Phobias




(c) Psychical Depression




(d) Anorexia




(e) Insomnia

Plate I.—Circles associated with Psychical Disorders

Dowse writes thus :

> " The patient tries and forces, cultivates and coaxes his will, to endeavour to bring it into play, but *he fails in will-power*, and the more he exercises energy to will, the more does the effort fade away, until finally energy and will seem extinguished."
>
> " Not unfrequently the very effort to will annihilates will-power." [1]

### (b) Mental Depression

In other cases, neurasthenia shows itself by profound mental depression. Many neurasthenics are inveterate pessimists, and their depression aggravates the neurasthenia (Plate I. c).

This condition is very characteristic of traumatic neurasthenia, especially in cases under litigation. The more the victim broods over his symptoms the worse they become, and the greater his depression, in harmony with the psychological law that " attention intensifies sensations." Mischief is often due to the interaction of the mind of the patient and that of the doctor or solicitor, *i.e.* to hetero-suggestion.

Thus Thorburn writes :

> " The patient has often heard that after the shock of, let us say, a railway accident, symptoms are liable to be progressive, to develop at remote periods and to endure indefinitely. In this condition

[1] Neurasthenia, pp. 28, 30 ; cf. also Mathieu and Roux, Gastro-Pathologie Intestinale, Series 1. (1909), p. 264.

of expectation of disaster he consults probably both his medical and his legal advisers. The former has often a limited experience of traumatic neuroses; he knows that his patient is and always has been an honest man; he may have doubts in his own mind as to whether organic disease of the nervous system does not follow shock. In any event, he enters upon his task of relief and encouragement with a more serious aspect than he would otherwise assume, he takes careful note of all minor symptoms, and he probably has to write reports to the solicitor, which he is asked to make 'as strong as possible.' The solicitor is an even graver danger; it is his professional duty to obtain the largest possible amount of compensation for his client, and in so doing to emphasize to the utmost any loss, inconvenience or suffering which the latter may have sustained, and especially to guard against the making of any settlement before all possible future inconveniences have been excluded. None of the people thus concerned have any intention to exaggerate, but each mind reacts upon the other, and we have established a complete Vicious Circle as a result of which the unfortunate patient tends to grow daily worse." [1]

At times the mental depression is associated with malnutrition and this intensifies the neurosis.

As Rayner says:

"In diseased conditions, especially in the depressed emotional states, the interaction of the mind on the body and of the bodily state on the brain establishes a Vicious Cycle of nutritional disorder, which tends to increase and prolong the disease." [2]

[1] *Proc. R.S. of Med.*, 1913, Vol. VII. (*Neurological Section*), p. 8.

[2] Allbutt and Rolleston, System of Medicine, Vol. VIII., p. 965.

Malnutrition, however, is by no means a necessary factor in this Circle. Neurasthenic melancholy may even complicate obesity.

### (c) Anorexia Nervosa

A remarkable Circle is associated with anorexia nervosa, a disorder to which Weir Mitchell and others have directed attention. The neurosis, commonly met with in women, leads to loss of appetite, refusal of food, general malnutrition, starvation of the neurons and eventually to a steady increase of the neurosis.

The nervous system is profoundly affected, the blood is impoverished and all the psychical functions disordered. As a result the sufferer becomes a bed-ridden helpless invalid, a burden to herself and her family. In course of time the malnutrition reduces the body to a bag of little more than skin and bones, and a fatal issue often closes the scene (Plate I. d).

Schofield thus describes the Circle :

> " A Vicious Circle is often kept up in these cases which it is absolutely essential to break. They begin, it may be, with loss of appetite from some slight cause. This . . leads to disordered thoughts and the idea of disease is started. This, again, makes the appetite still more capricious ; the thoughts therefore get still worse, and so the body starves the brain, and the brain starves the body ; and the emaciated patient having, probably enough, first worn out her friends, sinks at last into her grave from sheer starvation. I have seen such deaths." [1]

[1] Nerves in Disorder, p. 162.

Debove, Achard and Castaigne also refer to this Circle :

> " The patient becomes a slave to her whims, and even when the emaciation becomes serious and dangerous finds it impossible to escape from the fatal Circle in which she is involved." [1]

### (d) Insomnia

Insomnia is a common complication of neurasthenia ; indeed it is " generally one of the links of the Vicious Circle in which the victim is enchained." [2]

In a healthy individual physical or mental fatigue conduces to sleep and recuperation. But in neurasthenia the exhaustion of the neurons often provokes an irritability which hinders sleep and aggravates exhaustion (Plate I. e). This intrinsic insomnia may be due either to abnormal activity of the cerebral cells or to insufficient contraction of the cerebral blood-vessels. In regard to the first of these conditions Sawyer writes :

> "Any cause which directly prevents a repose duly deep of a sufficient number of those brain cells which are the organs of conscious thought, will render sleep impossible. Relative cerebral hyperæmia is an inseparable consequence of such activity, and such relative cerebral hyperæmia becomes a concurrent, but subordinate, cause of insomnia. Here there is progression through a Vicious Circle of two terms, in which the impulse of the morbid movement springs from the cerebral cells." [3]

---

[1] Maladies du Tube Digestif, Vol. I., p. 509. Cf. also Löwenfeld, Neurasthenie und Hysterie, p. 197.

[2] Allbutt and Rolleston, System of Medicine, Vol. VIII., p. 750.

[3] Insomnia, its Causes and Cure, p. 26.

In another group of cases the insomnia is due to some condition which prevents the brain from becoming sufficiently anæmic for sleep.

> "There are causes of insomnia which act primarily in exciting and in sustaining a relative cerebral hyperæmia, and with it, and in consequence of it, is again a progression through a Vicious Circle of two terms, but one in which the impulse of the morbid movement springs from the cerebral blood vessels." [1]

Another form of insomnia may be due to excessive fatigue, to such exhaustion of the nerve centres as to cause arrest of the processes of repair; such a condition is the more readily provoked in neurasthenics owing to their lessened reserve. The insomnia then hinders recuperation and acts as a malignant abettor.

Mrs. Garrett Anderson writes:

> "If the nutrition of the higher centres is so far enfeebled that sleep from the first is difficult, imperfect, and scanty, the Vicious Circle is begun. The nutritional nerves are day by day still further depressed, in the absence of natural and restful sleep, and they presently give out, and cannot work at anything like the normal rate. Then the Circle is complete. Tired nerve cells of brain and cord, irritated by imperfect blood-supply, no sleep possible, nutritional activity very low, repair therefore almost nil, neurasthenia the result. The Circle once forged is terribly hard to break. It can only be broken by gradually restoring the processes which make for repair, *i.e.* the power of sleeping and the power of digesting, and by checking in the meantime everything which increases the expenditure of nervous energy." [2]

[1] Sawyer, L.c., p. 27.

[2] Encyclopedia Medica, Vol. VIII., p. 336.

The neurasthenic person is apt to acquire habitual sleeplessness owing to the cerebral cells or vessels failing to return to their periodical state of quiescence. The psychical factor also becomes of great influence. The harder the sufferer tries to sleep the less his success.

> "Insomnia and the dread of it react upon each other to heighten their intensity." [1]

Job expressed the same idea:

> "When I lie down I say: When shall I arise and the night be gone? And I am full of tossings to and fro unto the dawning of the day." [2]

Insomnia is closely associated with night terrors in neurotic children. With such a temperament strong emotion may suffice to provoke night terrors and insomnia. These if frequently recurrent tend to further depress the nervous system and complete the Circle. In other cases the uric acid diathesis or mucous disease may, as Guthrie points out, be "phenomena forming part of the Vicious Circle," [3] owing to the accompanying depression.

Although for the sake of clearness it has been convenient to discuss these psychic Circles individually, several Circles frequently co-exist, their mischievous influences being cumulative. For example, in severe neurasthenia, insomnia and melancholy are often present at the same time, reducing the sufferer to the utmost misery.

---

[1] *British Med. J.*, 1897, Vol. II., p. 862.

[2] Chap. VII., 4.

[3] Functional Nervous Disorders in Childhood, pp. 81, 84.

Thus Müller writes :

> " The mental depression reacts on nutrition, sleep and the other vital functions, and thus creates a distressing Vicious Circle which aggravates the primary disorder. Various other neurotic and psychical phenomena, which can scarcely be called neurasthenic, may also sooner or later shew themselves." [1]

The above form a few of the more striking psychical Circles met with in neurasthenia. But almost any form of disordered psychic activity may arouse auto-suggestions which will then intensify the disorder.

[1] Handbuch der Neurasthenie, p. 61.

# Chapter Three

## CIRCLES ASSOCIATED WITH THE VASCULAR SYSTEM

IN a large number of Circles psychical and physical disorders act and react on one another. Owing to the increased sensitiveness of the nervous system peripheral impulses which would not affect consciousness in a healthy individual evoke uncomfortable or even painful sensations in the neurasthenic. These disturb the processes of ideation and arouse injurious auto-suggestions. The direction of consciousness to those sensations aggravates them, since, as is well known, attention intensifies sensations (Plate II. a).

This general principle is thus stated by Krafft-Ebing :

> "A true Vicious Circle is gradually developed in neurasthenia, in consequence of the morbid relations between the psychical and the somatic condition. For a crowd of functional disorders are projected by the psychical condition into the extracephalic organs, and these in their turn react on the psychical condition, more especially on the emotions."[1]

### (a) Cardiac Neurasthenia

Cardiac neurasthenia may be complicated by a most troublesome Circle, since functional disorders

[1] Nothnagel, Specielle Pathologie und Therapie, Nervosität und Neurasthenische Zustände, p. 71.

connected with the heart, even when in themselves trivial, arouse acute anxiety which intensifies the neurasthenia. Imaginary heart disease is said to be even commoner than organic disease, and supplies a good illustration of how a dreaded disease may provoke corresponding subjective sensations (Plate II. b).

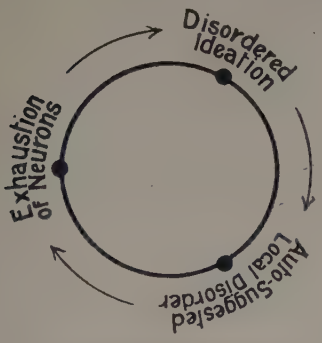
The sequence of events is somewhat as follows : the fear of organic heart disease leads to auto-suggested sensations in the cardiac region, followed by disturbance of the cardiac action such as tachycardia, occasional extrasystoles with palpitation, and an intermittent pulse. The associated sensations then arouse distress and terror, which in their turn further disturb the cardiac action.

Such attacks are especially common at night and may be caused by nightmare, and the operation of this Circle may reduce the neurasthenic person to a condition of utter misery. Even fatal syncope may result.

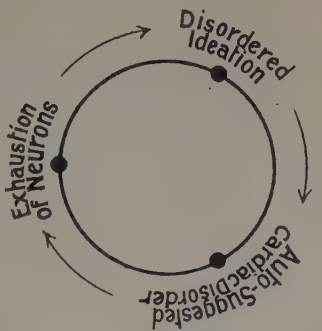
André-Thomas thus describes the condition :

> " Not only may neurasthenia give rise to cardiac disorders and anxieties, but cardiac anxieties may also give rise to neurasthenia. . . . Emotions, kept alive by fear, aggravate the symptoms or create fresh ones. Thus the patient becomes involved in a Vicious Circle, which persists until he can be convinced that there is nothing amiss with his heart." [1]

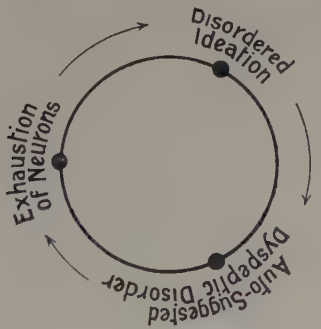
[1] Psychothérapie, pp. 229, 230.



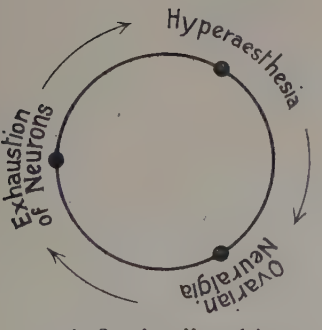

(a) Auto-suggested Local Disorder




(b) Auto-suggested Cardiac Disorder




(c) Auto-suggested Dyspeptic Disorder




(d) Ovarian Neuralgia

(e) Asthenopia

Plate II.—Circles associated with Somatic Disorders

Vorkastner also refers to such psychogenic disorders :

> " In some cases hypochondriacal influences are predominant. Some strong emotion may awaken the first idea of cardiac disorder and then recede into the background. In its place is aroused a complex disordered ideation, in fact a symptom-complex (Krankheits complex), and as a result of the harassing doubts and anxieties this morbid ideation then becomes a dominating factor in his ideational existence (Vorstellungsleben), as may any other strong emotion. Any increase of the emotion may again lead to cardiac disorder and this by means of a real Vicious Circle aggravates the emotion. If this symptom-complex remain long within the sphere of consciousness, we have a typical picture of cardiac hypochondriasis. The sufferer for hours together watches his pulse with acute anxiety. Any supposed abnormality arouses a storm of fresh emotions and these further disturb the cardiac action." [1]

Another excellent description is given by Ziemssen :

> " On the slightest excitement, and even without any at all, well-marked tachycardia comes on, combined with a series of extremely unpleasant sensations, including not merely the perception of the heart's beat but actual pain, especially in the vicinity of the apex, together with a terrifying irregularity, with the strangest sensations both during and after the pause, with feelings of stoppage of the heart's action, of pushing, of jumping, of twisting of the heart on its own axis, of its leaping up to the throat, etc., etc. These fits of tachycardia are generally accompanied by vertigo, as well as nausea, sudden exhaustion of strength, and feeling of annihilation. For many such patients when they

[1] Lewandowsky, Handbuch der Neurologie, Vol. V. (iv.), p. 40.

come to the doctor the diagnosis of organic disease of the heart has been for long a matter of certainty, and they are quite unpleasantly surprised to hear that the physical examination reveals no cardiac abnormality. All things considered, cardiac neurasthenia is one of the worst forms, because the patient never gets rid of his uneasiness and anxiety. The mere terror that the palpitation, with its attendant nameless discomforts, might come on, suffices to drive the excitable heart at double its normal pulse-rate." [1]

The following extract from Dubois is interesting since the idea of increment is indicated by the use of the term "spiral" as preferred to "circle."

"The patient may attribute the beginning of his trouble to some psychical disorder, such as an imaginary evil that worries and frightens him. Or, conversely, he may attribute his trouble to some emotion due to his local disorder. In either case his disorder works in a Vicious Circle or rather in a spiral.

For the local trouble that bothers him arouses hypochondriacal ideas and causes distress. This gives rise to palpitation and gastro-intestinal dyspepsia which in their turn create phobias. These fresh disturbances then provoke other functional disorders, or aggravate the existing ones.

Hence a fresh source of phobias which drive the victim further along the spiral." [2]

An artificial Circle of this kind is often created when an inexperienced physician erroneously diagnoses a "weak heart," and excites in his patient an ever-present dread of illness or immediate death. The constant direction of the mind to the imaginary lesion leads to morbid

[1] Clinical Lectures by German Authors (N.S.S.), 1894, p. 69.

[2] Volkmann, Sammlung Klinischer Vorträge (Innere Medizin, Nos. 137-166), 1907-1909, p. 520.

consciousness of trivial sensations, to such an unwholesome *régime* as to induce a feeble and flabby heart, which at the slightest provocation reacts on the neurotic condition. The exaggerated fears, like a sword of Damocles, over-shadow life and render all enjoyment impossible.

When an over-sensitive temperament is associated with real disease of the heart, the anxiety aroused may seriously delay the progress of compensation.

Thus Mitchell Bruce writes :

> " Depressing emotions contribute to failure of compensatory hypertrophy of the heart, and in this respect a Vicious Circle is formed, which can often be broken by judicious management." [1]

Where pain is associated with a cardiac disorder a powerfully aggravating factor is introduced. For the suffering concentrates attention on the source of pain and renders the victim more introspective than ever.

Herman thus describes the reciprocal relations between pain and neurasthenia :

> " The great causes of neurasthenia are conditions which (a) cause continuous pain and (b) prevent sleep. The two things often form a Vicious Circle. A small local cause disturbs sleep, and want of sleep makes the nervous system over-sensitive. In proportion as the neurasthenic symptoms have coincided in time with the development of local pain, so surely may we conclude that the removal of the local pain and the procuring of sound sleep will cure the neurasthenia." [2]

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[1] Principles of Treatment, p. 81.

[2] *British Med. J.*, 1910, Vol. I., p. 183.

### (b) Anæmia

Some cases of neurasthenia are complicated by anæmia, which reacts on the neurasthenia, as Löwenfeld points out :

> " In neurasthenic persons the anæmia is not so much the cause, as the result of the nervous condition. For this latter affects both appetite and digestion and so leads to malnutrition. A Vicious Circle is now established, since the malnutrition perpetuates and intensifies the nervous dyspepsia. All the resources of therapeutics will be required if this Vicious Circle is to be broken." [1]

### (c) Blushing

Blushing is another common disorder which may be both cause and effect of neurasthenia. The more self-conscious, the more the woman blushes. The more she blushes, the more self-conscious does she become.

[1] Neurasthenie und Hysterie, pp. 79, 197.

# Chapter Four

## CIRCLES ASSOCIATED WITH THE RESPIRATORY SYSTEM

ALTHOUGH neurasthenia is not often associated with respiratory disorders, examples of Circles are occasionally observed.

### (a) Catarrhophobia

An excessive dread of catching cold is sometimes met with. The victim wears the thickest clothes, buries his neck or even his nose in a fur, avoids the slightest draught and anxiously studies every change of temperature and wind. A morbid sensitiveness is the result, and any passing catarrh evokes increased preoccupation and phobias that lead to even minuter precautions.

### (b) Tuberculosis

Tuberculosis in some cases provokes acute neurasthenia. The patient harbours the gloomiest outlook on the future, and refuses to co-operate in the necessary measures for arresting the disease. Such a psychological condition is highly

prejudicial to recovery, and favours the progress of the disease.

> "Pour guérir de la tuberculose, il faut vouloir guérir, le vouloir bien, le vouloir longtemps." [1]

The neurasthenia sometimes takes the form of severe anorexia and malnutrition, followed by rapid progress of the tuberculosis and an increase of the neurosis.

Mott describes these morbid correlations :

> "It is impossible to say whether the tuberculous toxin is a cause or an additional factor in the production of the mental phenomena. Certainly a Vicious Circle tends to be produced, for refusal of food and impaired nutrition, with slow and shallow respiration and feeble circulation, tend toward rapid progress of the infective process, and thereby an increased amount of tuberculous toxin is poured into the blood." [2]

Phthisiophobia in neurasthenic individuals may also establish injurious correlations by giving rise to excessive precautions. The dwelling-rooms are kept at a rigorously uniform temperature, every crevice by which fresh air could enter is blocked. Such excessive precautions are in reality phthisiogenetic, since they lower vitality and favour the advance of disease.

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[1] Brouardel et Gilbert, Maladies des Bronches et des Poumons, p. 423.

[2] Allbutt and Rolleston, System of Medicine, Vol. VII., p. 225.

### (c) Stammering

The exaggerated self-consciousness which sometimes complicates neuroses may be associated with the habit of stammering. Many persons stammer but slightly when perfectly at ease. But any excitement which causes nervousness or provokes auto-suggestions, aggravates the stammering and this aggravation increases the nervousness. The stammerer stammers most when he is trying his hardest not to stammer.

# Chapter Five

## CIRCLES ASSOCIATED WITH THE DIGESTIVE SYSTEM

SUCH intimate correlations exist between the nervous and the digestive systems that Circles are constantly created between them (Plate II. c).

Drummond tersely describes the condition when he says :

> " The subject of neurasthenia fails to digest his food and suffers in consequence, a Vicious Circle being established." [1]

Bain also writes :

> " Digestive disorders are very common, and, while primarily due to the nervous exhaustion, the state of the stomach reacts on the patient's condition, and makes the neurasthenia worse, so that a Vicious Circle is established." [2]

The importance of a detailed acquaintance with such Circles is thus emphasized by Mathieu and Roux :

> " There is in these cases an interlocking system of Vicious Circles with which the physician must be familiar if he wishes to understand the mechanism of the diseased organism, and if he wishes his treatment to be logical and useful." [3]

We may now refer to some common examples.

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[1] *British Med. J.*, 1910, Vol. I., p. 615.

[2] Text-Book of Medical Practice, p. 727.

[3] Les Cercles Vicieux dans la Pathologie Gastro-Intestinale. Pathologie Gastro-Intestinale. Series I. (1909), p. 147.

### (a) Pyorrhœa Alveolaris

A Circle is often associated with malnutrition due to pyorrhœa alveolaris, or some similar source of sepsis.

Burchard and Inglis thus refer to it :

> "By the term malnutrition is meant a more or less general disturbance of the metabolism of cells, as a result of the failure of one or more important organs to perform its full function, either of food supply or waste elimination. The fault may lie with the disturbance of the nervous system controlling metabolism or with the stomach, lungs, liver, skin, kidney, blood, etc. The tissues are either deprived of normal food elements (tissue starvation) or are presented with waste products formed within the body and retained in the blood (auto-intoxication). . . . . Whether a tangible disease condition or merely an alteration in nutrition not obvious to the individual, it may act as a predisposition to local bacterial action—*e.g.*, as in pyorrhœa alveolaris. When the malnutrition is accompanied by a local infection, the latter may, by the production of toxins which are absorbed, increase the malnutrition, which further aids the action of the exciting causes by acting as a predisponent, lessening resistance. This result is called a Vicious Circle." [1]

### (b) Aërophagy

The habit of aërophagy is closely associated with neurasthenia in a troublesome Circle.

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[1] Dental Pathology and Therapeutics, pp. 28, 62.

Thus Mathieu and Roux write :

> " Severe aërophagy generally shews itself in neuropaths, and results from their predisposition and nervous temperament. Moreover in its turn it aggravates the neurasthenia or one or other symptoms of that disorder by means of one of those Vicious Circles that are so common in neuropathology. Many of the sufferers are inclined to worry about trifles or are subject to definite phobias. They dread the approach of an attack of aërophagy, and that is precisely what is likely to provoke a recurrence. Thus they tend to grow more and more neurasthenic." [1]

### (c) Atonic Dyspepsia

Atonic dyspepsia is one of the commonest disorders met with, as Krafft-Ebing points out :

> " Gastric and intestinal disorders are very frequent in neurasthenia. They may indeed combine to form a typical picture of visceral neurasthenia in which the irritable weakness of the nervous system seems either permanently or temporarily to be concentrated. In other cases they seem to be symptoms and syndromes mixed up with other neurasthenic phenomena and localisations, especially cerebral ones. The great frequency with which cerebral and intestinal symptoms of neurasthenia are associated is due to the intimate connection between the brain (and the emotions) and the digestive tract. It is well known what a powerful influence psychical processes can exert on the secretory and motor functions of the stomach and intestines, and conversely what reactions chronic disease of the latter exerts on the brain and especially on the emotions." [2]

[1] Pathologie Gastro-Intestinale, Series I. (1909), p. 185.

[2] Nothnagel, Pathologie und Therapie, Nervosität und Neurasthenische Zustände, p. 109.

Mathieu and Roux thus describe the Circle :

> " These weak and emaciated patients with no appetite, bad digestion and taking inadequate food are involved in a Vicious Circle. For their weakness due to the long-continued insufficiency of food aggravates their neurosis as well as their dyspepsia, and this leads to further restriction in their daily supply of food. Rest and better alimentation are the only way of curing them." [1]

Buckley also refers to the condition :

> " Digestive disorders are frequently a result of exhaustion of the nerves controlling the digestive functions, and they play a most important part both in producing and perpetuating the disease owing to the resulting malnutrition of nervous structures and the auto-toxæmia arising from intestinal putrefactions. The most common disorder is gastro-intestinal atony." [2]

Auto-suggestion associated with dyspepsia may play a great part in aggravating neurasthenia, as pointed out by Proust and Ballet :

> " Some neurasthenics imagine themselves attacked by a grave gastric lesion, for example by cancer. Their ceaseless preoccupation with the condition of their stomachs makes them gloomy and discouraged, and their neurasthenia is correspondingly aggravated." [3]

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[1] Pathologie Gastro-Intestinale, Series IV. (1913), p. 382.

[2] *Practitioner*, 1911, Vol. I., p. 144.

[3] The Treatment of Neurasthenia, tr. by P. C. Smith, p. 136.

In many cases it is impossible to say whether the initial factor is of nervous or gastric origin :

> " Remember," writes Schofield, " in Vicious Circles it is an open question which is cause and which is effect. Dyspepsia causes ' nerves,' and ' nerves ' cause dyspepsia, and so each acts on the other, and which is cause and which effect is not always easy to say." [1]

### (d) Hyperchlorydria and Pyloric Spasm

Hyperchlorydria associated with pyloric spasm and gastric stasis form a Circle which is often met with in neurotic subjects.

During normal digestion the pyloric sphincter remains for the most part closed, relaxing at intervals so as to allow acid chyme to be spurted through, and then closing again under the influence of the duodenal reflex. When the acid chyme in the duodenum has become neutralized, the pylorus again relaxes and more chyme passes into the duodenum ; the reflex then again closes the pylorus and so the process continues until the stomach is empty.

In cases of hyperchlorydria, however, this mechanism is liable to be disturbed. The normal contraction may be replaced by vigorous and persistent spasm of the pyloric sphincter, followed by retention of the gastric contents. Such retention then provokes further hyperchlorydria

[1] The Management of a Nerve Patient, p. 82.

and so completes the Circle. Hyperchlorydria, pyloric spasm and gastric stasis may form an obstinate concatenation of phenomena.

Mathieu and Roux write :

> " Reichmann's syndrome presents one of the most remarkable examples of a pathogenic Vicious Circle. The following are the component factors : persistent pain, hypersecretion of gastric juices, hyperchlorydria and stasis. The pain and the retention of gastric contents have been proved to be due to spasm of the pylorus. But the retention perpetuates the hypersecretion and this in its turn perpetuates the spasm. In a considerable number of cases there is an ulcer at or near the pylorus which causes the pain, spasm and hypersecretion. In fact, the hypersecretion and stasis prevent the healing of the ulcer." [1]

### (e) Gastrectasis

In severe cases of neurasthenia the atonic stomach may undergo some dilatation followed by stasis. Frequently also boulimia is present and intensifies the dilation.

Mitchell Bruce thus describes the Circle :

> " The subjects of chronic gastric catarrh, associated with a degree of dilatation of the stomach from atony of the wall, develop an excessive appetite and eat largely. A Vicious Circle is established, and the morbid condition aggravates itself automatically." [2]

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[1] Pathologie Gastro-Intestinale, Series I. (1909), p. 151.

[2] Principles of Treatment, p. 471.

### (f) Visceroptosis

Any displacement or undue mobility of the viscera is liable to establish reciprocal correlations, since the constant aching lowers the nervous tone.

> "The chronic pain in neurasthenic individuals increases the nervous depression, a Vicious Circle being thus produced; but neurasthenia is never a result of visceroptosis alone." [1]

It is difficult to say which of the reciprocally acting factors is primary. Monod believes the enteroptosis to be such:

> "In the Vicious Circle that leads from enteroptosis to nervous trouble and from nervous trouble to enteroptosis, we believe that the nervous trouble is secondary." [2]

### (g) Toxæmia

Alimentary toxæmia is often closely related to neurasthenia both as cause and effect.

The toxins absorbed in cases of chronic intestinal stasis exert a depressing influence on the nervous system, diminishing peristalsis and thus promoting further stasis. Moreover the toxæmia diminishes the resisting power of the tissues to the entry of organisms and thus promotes increased intoxication. In other cases the depressed nervous system is the primary factor leading to intestinal atony, chronic stasis, further absorption and increased nervous depression.

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[1] Keogh Murphy, The Practitioner's Encyclopædia of Medicine and Surgery, p. 231.

[2] *Practitioner*, 1913, Vol. II., p. 678.

Mantle thus refers to the correlation :

> " I believe the toxins from the intestine have a special affinity for the nerve centres, and although I am quite prepared to admit that neurasthenia is the cause of constipation (the intestinal wall and reflexes taking on the lethargy common to the neurasthenic condition), yet the bowel stasis increasing bacterial activity, and possibly absorption of toxins, may increase the nervous symptoms of neurasthenia, and also affect the vaso-motor centres, bringing about the circulatory changes which are so common in these cases." [1]

Alimentary toxæmia may result from disorder in any section of the digestive tract ; two locally affected areas may react on each other.

As Leslie says :

> " The chronic nature of the complaints associated with alimentary toxæmia is largely due to the fact that a Vicious Circle is established. Hence when once oral sepsis has led to gastro-intestinal trouble, the oral sepsis itself may be kept active by the secondary complaint." [2]

### (h) Vomiting

Some neuropaths are much troubled by nausea and vomiting which are provoked by any strong emotional disturbance. The more frequent the vomiting, the less the irritation required to pro-

[1] *Proc. R. S. of Med.* (1913), Vol. VI. (i.), (*Alimentary Toxæmia*), p. 157.

[2] *Proc. R. S. of Med.* (1913), Vol. VI. (i.), (*Alimentary Toxæmia*), p. 275.

voke it. The mere influence of suggestion seems at times enough to provoke an attack which then supplies the source for further suggestion.

André-Thomas describes the correlations :

> " Gastric disorders due to neurasthenia are sometimes complicated by vomiting, and are then very difficult to treat. The neurasthenic vomiting may be the principal symptom, and occur under the influence of any strong emotion. Such emotion may either cause indigestion or else resolve itself at once in emesis. Should the emotion recur frequently the vomiting is also apt to recur, and especially so when the intervals are short. Suggestion may in itself be enough to arouse the emotion, so that a Vicious Circle is established." [1]

### (i) Colitis

Although the whole digestive tract has intimate relations with the nervous system, the colon has specially close relations with neurasthenia. The local and the neurotic condition appear often to play into each other's hands, as Mathieu points out :

> " In cases of muco-membranous colitis . . . . . a true Vicious Circle appears often to be present. The neurasthenia and the colitis react on and aggravate each other." [2]

And again :

> " The colitis, the pain and the nutritive disorders create and perpetuate the neurasthenia. The neurasthenia in its turn aggravates the colitis. A Vicious Circle is present."

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[1] André-Thomas, Psychothérapie, p. 270.

[2] Traité des Maladies de l'Estomac et de l'Intestin, pp. 288, 304.

Mathieu and Roux also write :

> " The injurious operation of a Vicious Circle is specially obvious in those severe cases of muco-membranous colitis in which painful spasms and the neurasthenia reciprocally provoke and perpetuate each other." [1]

Ulceration of the intestines is often associated with the presence of abnormal forms of bacteria.

> " Normally, the fæces contain an enormous number of bacteria, about one-third of the dried weight of the fæces, but it must not be supposed that these are all pathogenic. Indeed, bacteria play a great part in intestinal digestion, and for perfect health it is only necessary that the various groups of bacteria should be present in a normal ratio. The use of the bacteria is mainly twofold : (a) digestive, and (b) anti-putrefactive and antiseptic. The chief bactericidal agent is B. coli communis, which is destructive to nearly all bacteria except staphylococcus and streptococcus, and the other important defence is the intact intestinal mucosa. If either of these two defensive agents are defective, we have an enormous development of injurious and actively fermentative germs, such as B. acid. putrifici coli, B. liquefaciens, etc. These, by their toxins and ferments, act upon the mucous membrane, destroying its continuity and giving rise to ulceration. In this way a Vicious Circle occurs, the disease of the bowel altering the bacterial flora, and the bacteria increasing the ulceration ; and the products of these secondary infections, when increased in amount, give rise to auto-intoxication with its accompanying constipation, headache, neurasthenia, etc., and in its later stages to arterio-sclerosis and its attendant evils." [2]

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[1] Pathologie Gastro-Intestinale, Series I. (1909), pp. 332, 442.

[2] Carson, *Practitioner*, 1912, Vol. II., pp. 463-4.

## (j) Constipation

Neurasthenia frequently gives rise to constipation and this intensifies the neurasthenia.

> "Habitual constipation is associated still more frequently with general neurasthenia than with any of the conditions thus far enumerated. The nature of this association is probably not the same in every case. Often neurasthenia and constipation seem to be co-ordinate symptoms; sometimes existing constipation has an unfavourable effect upon the psychical conditions of patients, rendering them feeble, fretful, out of sorts, and nervous. As a rule, however, neurasthenia is the primary disease, and then the irregularity of the bowels appears as a result of abnormal nervous influences or secondary conditions. Often the two states act in a Vicious Circle, each sustaining and aggravating the other." [1]

Binswanger also describes this Circle:

> "The subsequent effects of chronic constipation create a most injurious Vicious Circle. For the accumulated fæces lead to further arrest of peristalsis, and thus to further accumulation, as well as to a greater production of flatus. If the condition is prolonged, . . . the large intestines may become completely relaxed." [2]

At times the constipation is complicated by symptoms of biliousness, as Dana points out:

> "The existence in neurasthenics of a tendency to constipation, or what is popularly known as 'biliousness,' accompanied by a gouty or lithæmic diathesis, has been much dwelt upon. . . . . I am convinced that this tendency is rather the result of weak nerve centres than the cause, though the two often act in a Vicious Circle." [3]

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[1] Strümpell, Text-book of Medicine, 1911, Vol. I., p. 611.
[2] Pathologie und Therapie der Neurasthenie, p. 255.
[3] Nervous Diseases and Psychiatry, p. 577.

### (k) Diarrhœa

Some neurasthenic persons are much troubled with serous diarrhœa, which in its turn intensifies the neurosis. Especially is this diarrhœa liable to occur at times of anxiety and strong emotion. In other cases accumulated fæces mechanically irritate the intestinal walls so as to cause a catarrhal diarrhœa which in no way relieves the accumulation. In fact the constipation is aggravated, as Krafft-Ebing points out :

> " Coprostasis is liable to cause irritation of the intestinal walls and thus provokes catarrhal diarrhœa. In course of time a regular Vicious Circle may be established, since the irritation aggravates the constipation, and this again causes diarrhœa. A more serious result is pseudo-membranous colitis, when the chronic catarrh goes on to ulceration of the mucosa." [1]

[1] Nervosität und Neurasthenische Zustände, p. 113.

# Chapter Six

## CIRCLES ASSOCIATED WITH THE GENITO-URINARY SYSTEM

SO numerous are the Circles associated with the sexual system in neurasthenia that it is only possible to select a few typical examples.

### (a) Spermatorrhœa

In males with a neuropathic taint, seminal emissions, if very frequent, may lower the resistance of the nervous system and give rise to an irritability which increases the frequency of emissions.

> "Often the emissions are only a link in a Vicious Circle, as their depressing effect, when they are frequent, and the worry they occasion, may diminish the patient's energy and cause him to adopt a less vigorous and more sedentary life, while, in this condition the emissions themselves tend to become more frequent." [1]

This form of neurasthenia is often complicated by insomnia due to psychical worries and pricks of conscience. A second Circle is then established.

> "As insomnia naturally depresses his energies and lowers his resistance, a Vicious Circle is established, which can easily produce the intensest form of neurasthenia." [2]

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[1] Holmes, *Practitioner*, 1911, Vol. I., p. 53.

[2] Holmes, L.c., p. 53.

### (b) Masturbation

Another Circle is associated with masturbation. Here a vicious practice establishes a Vicious Circle, as Oppenheim points out :

> " In many cases we have a Vicious Circle ; the tendency to masturbation is in itself a symptom of neuropathic diathesis, and the masturbation again gives rise to a crowd of nervous disorders." [1]

Müller also describes these reciprocal correlations :

> " In neurasthenic persons of both sexes, especially if unmarried, there is a tendency to satisfy the sexual instinct by means of masturbation. Indeed it is often difficult to decide whether the masturbation should be regarded as a result or as a cause of the sexual neurasthenia, since a Vicious Circle has generally been established." [2]

### (c) Impotence

Psychical impotence is by no means uncommon in neurasthenia, and arises from mistrust of self or from an exaggerated fear of the effects of early masturbation, or again from the remembrance of previous failures. The mere thought that coitus will be impossible or unsatisfactory is enough to make it so. Failure paves the way for future failure.

> " All forms of psychical impotence react on the *morale* and give rise to psychical disturbance which is associated with phobias and obsessions and ends in neurasthenia. This in its turn aggravates the functional disorders, so that the sufferer becomes involved in a Vicious Circle." [3]

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[1] Lehrbuch der Nervenkrankheiten, 1913, Vol. II., p. 1486.
[2] Neurasthenie, p. 181.
[3] André-Thomas, Psychothérapie, p. 226.

### (d) Uterine Disorders

The closest correlations between the nervous system and uterine disorders occur in neurasthenia. Thus Macnaughton-Jones writes :

> " If it be true that the nervous system can thus, through vasomotor effects and central nervous influences, induce ill-health and perversion of functions in the genitalia, causing, for example, amenorrhœa, dysmenorrhœa, and menorrhagia, the converse is equally true that morbid states of the genitalia which lead to excess, diminution, or absence of functional activity, will affect the ganglionic and central nervous system. This ' action and reaction ' it is that, once the Vicious Circle is formed, maintains the ill-health of both." [1]

This Circle is also well described by Faure and Siredey :

> " Women suffering from some disease of the sexual organs frequently shew signs of physical and moral depression which is closely allied to neurasthenia. Worn out by their sufferings, often anæmic through loss of blood or through prolonged confinement to the house, either in bed or on the sofa, these unfortunate women grow thin and feeble, and give way more to discouragement. They are now entrapped in a Vicious Circle, from which escape is difficult. Their neurasthenia induces dyspeptic disorders, and their malnutrition tends to aggravate their neurasthenia." [2]

### (e) Uterine Displacements

In sensitive, highly strung women, morbid correlations are frequently set up by uterine

[1] *Practitioner*, 1911, Vol. I., p. 68.

[2] Traité de Gynécologie Médico-Chirurgicale, p. 396.

displacement, especially if such displacement, as frequently happens, leads to persistent backache. It matters little whether the pain is due to uterine or ovarian displacement or congestion (Plate II. d). The nervous system and the local disorders act and react on each other.

As Amand Routh says :

> " We have frequently to deal with a Vicious Circle, with local and constitutional states so interacting, that no real improvement is possible until both the general and local states receive their due share of attention." [1]

Herman also writes :

> " In chronic pelvic pain with neurasthenia effects follow one another in a Vicious Circle. The patient feels more severely the pelvic pain because her nervous system is too sensitive. The persistent pelvic pain keeps her nervous system weak and sensitive and further weakens it." [2]

### (f) Vaginismus

Neurasthenia may shew itself in an abnormal sensitiveness and irritability of the external organs. Here the constitutional and local conditions aid

[1] Allbutt, Playfair and Eden, Gynæcology, p. 737.

[2] Diseases of Women (1907), p. 86 ; *British Med. J.*, 1910, Vol. I., p. 183.

and abet one another, as Robin and Dalché point out :

> " It matters little whether the general state of health is the cause or the effect of the local condition, for the two react on, and aggravate, each other in a Vicious Circle. Treatment must be directed to the nervous system, to the dyspepsia, to any visceral ptosis, to the anæmia, in fact to the entire organism which is out of order. Only when this is done will the local treatment of the vulvar irritation prove efficacious and permanent." [1]

### (g) Irritability of the Bladder

Pollakiuria is a common urinary disorder and occurs in persons whose thoughts are preoccupied with their bladder and the act of micturition. Their preoccupations cause them to urinate more often and this repetition keeps their mind preoccupied. In time such persons may become obsessed with the idea that their bladder is seriously diseased, and the obsession aggravates their nervousness. Moreover, frequent micturition in itself tends to increase the renal secretion and aggravate the pollakiuria.

### (h) Polyuria

Polyuria is another common disorder in neurasthenia and like other neuroses is closely associated with phobias and introspection. For persistent polyuria there must of course also be

[1] Traitement Médical des Maladies des Femmes, 1900, p. 284.

polydipsia, and the two conditions frequently co-exist.

> "Polyuria leads to polydipsia, and polydipsia in its turn keeps up the polyuria, so that the sufferer becomes involved in a Vicious Circle." [1]

### (i) Enuresis Nocturna

Enuresis nocturna is a somewhat allied condition frequently met with in highly nervous children. Some temporary derangement may start the disorder and this, if frequently recurrent, may so affect the impressionable nervous system as to become habitual even after removal of the primary cause.

Disgust and shame at so unpleasant an affection may also cause great mental depression and this tends to perpetuate the malady. The reprehensible custom of chastising, or threatening to chastise, the offender is highly injurious to neurotic children and necessarily aggravates the condition.

### (j) Movable Kidney

A floating kidney may set up a Circle in highly neurotic women, owing to the constant aching pain acting on the nervous system. The enfeebled nervous system is thus rendered over-sensitive and the victim is haunted by endless imaginary phobias. As Strümpell well says :

> "With a nervous hysterical woman the mere idea of possessing a floating kidney is enough to stir up a host of subjective symptoms." [2]

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[1] André-Thomas, Psychothérapie, p. 221.

[2] Text-book of Medicine, Vol. I., p. 801.

# Chapter Seven

## CIRCLES ASSOCIATED WITH THE SENSE ORGANS

### (a) Asthenopia

ASTHENOPIA is commonly associated with neurasthenia both as cause and effect. Owing to the increased liability to muscular fatigue, the muscles used in accommodation readily become exhausted, give rise to aching and arouse auto-suggestions. The greater the exhaustion, the greater the effort required for accommodation, and the greater the the nerve waste, while, on the other hand, the increased effort and lessened vitality aggravate the exhaustion (Plate II. e).

The process is often intensified by some error of refraction, such as hypermetropia. The overtaxed accommodation necessitates the removal of the object to a greater distance, and this leads to diminished acuity of vision. The latter then induces the sufferer to attempt closer work involving increased effort.

R. W. Doyne points out that anisometropia frequently establishes morbid correlations, owing to disturbance of the fusion centre and exhaustion of the muscles of accommodation reacting on each other.

> "The trouble arises from a Vicious Circle. The fusion centre demands clear images and makes demands on the lower centres which control the muscles of the eyes; the muscles become exhausted, the images become indistinct and the fusion centre becomes more imperious, as its task becomes more difficult. Moreover, all these details are mainly subconscious and independent of the will." [1]

### (b) Retinal Hyperæsthesia

In other cases of ocular neurasthenia there is no defect of accommodation, but merely retinal hyperæsthesia. Muscæ volitantes may in such cases be an incessant source of distress owing to the anxiety with which the patient observes them:

> "This observation itself places him in a Vicious Circle of action and reaction, for the more he pursues these phantoms, the more he is harassed by them, nothing being more fatiguing than the observation of such entoptic phenomena. Thus it is that they become a cause, both direct and indirect, of the weakening of the eye-sight." [2]

---

[1] *British Med. J.*, 1910, Vol. II., p. 363.

[2] Landolt, Refraction and Accommodation of the Eye, p. 457.

### (c) Photophobia

Photophobia is a prominent symptom of neurasthenia. It may begin with some trivial conjunctivitis giving rise to blepharospasm and then to retinal hyperæsthesia which again perpetuates the blepharospasm. This condition illustrates a great axiom thus enunciated by Clifford Allbutt :

> " In neurasthenics a local ill, acting and reacting thus, establishes a short circuit and a Vicious Circle ; and the local error must be at once readjusted." [1]

Moreover the seclusion from light, fresh air and exercise which is so often associated with retinal hyperæsthesia further depreciates the lowered resistance and aggravates the disorder.

Asthenopia, to whatever cause it may be due, is often complicated by insomnia, which may be partly due to the anxiety the patient feels as to a possible loss of sight.

> " Insomnia is a very prominent symptom of eye-strain and so a Vicious Circle is started ; eye-strain producing among other troubles insomnia, and insomnia in its turn aggravating the patient's condition, because the all-important restorative is wanting." [2]

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[1] Allbutt and Rolleston, System of Medicine, Vol. VIII., p. 755.

[2] Ernest Clarke, *Practitioner*, 1911, Vol. I., p. 26.

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### (d) Tinnitus

Disorders of the ear are not so often complicated by Circles as those of the eyes. Nevertheless some examples occur.

Thus severe tinnitus may give rise to a Circle, similar in its character to that met with where muscæ volitantes aggravate neurasthenia. Acute torment may be caused, and the more the mind is concentrated on the disorder the more is the sufferer harassed. Even severe physical depression may result, and this in turn intensifies the tinnitus.

A somewhat similar condition arises when the severe otalgia that complicates some forms of aural disease induces neurasthenia and hyperæsthesia which aggravate the otalgia.

### (e) Deafness

Even apart from tinnitus and otalgia, any impairment of hearing power is likely to react unfavourably on neurasthenia, as Dench points out :

> "After being subjected to the fatigue consequent on the day's activity, the hearing power becomes much diminished, and any effort on the part of the patient to disguise the symptom simply magnifies it. The local impairment, in turn, reacts upon the general condition of the patient to a considerable degree, frequently causing him to become hypochondriac, and in some cases leading to acute melancholia." [1]

[1] Diseases of the Ear, p. 663.

### (f) Sinusitis

Severe neurasthenic symptoms may accompany chronic sepsis of the accessory nasal cavities, the sequence being similar to that in other septic conditions. The absorption of toxins lowers the tone of the nervous system, diminishes the resisting power of the tissues to septic absorption, and paves the way for increased sepsis.

### (g) Pruritus

Disorders of the skin are frequently aggravated by neurasthenia, an obstinate and sometimes incurable Circle being established.

A familiar example is presented by pruritus, a disorder which may occur independently of local irritation or of pathological changes in the skin. Thus Kaposi speaks of persons in whom the fear of pruritus coming on in a theatre, where there would be no opportunity of privacy, sufficed to excite an attack :

> "Whether the affection proceeds rapidly or slowly, it almost always culminates in an itching of great intensity. The patient is irresistibly compelled to scratch. . . . In many cases the scratching aggravates the pruritus, by increasing the reflex irritation."[1]

[1] Twentieth Century Practice of Medicine, Vol. V., p. 766.

Pruritus vulvæ and ani are local forms of the disease which are particularly troublesome where there is a neuropathic taint.

Kelly describes the Circle in pruritus vulvæ :

> " The changes in the skin, so often observed in pruritus, are secondary to the disease, and arise from the itching and consequent scratching or else from the presence of irritating discharges. These secondary changes do not constitute the affection, though they undoubtedly aggravate it. . . . In many cases the profound skin changes, when once induced, are sufficient themselves to keep up the pruritus even after the original cause is removed ; in fact, these cases move in a truly Vicious Circle : the itching provokes scratching and the scratching, in its turn, causes changes in the skin which excite more itching, and this again provokes the desire for relief by renewed scratching, and so the disease grows constantly worse, feeding itself upon the very means which the victim instinctively seeks for relief." [1]

### (h) Prurigo

In prurigo also the neurotic element plays an important part. There has been much dispute as to whether the scratching gives rise to the papules or the papules to the scratching ; but whatever the sequence, a Circle is established.

Sir Jonathan Hutchinson writes :

> " Prurigo, from whatever cause it may have begun, tends to perpetuate or even to aggravate itself. It causes itching, and the itching causes scratching, and the scratching extends the prurigo, and thus the patient goes on from bad to worse." [2]

---

[1] Medical Gynecology, 1909, p. 277.

[2] Lectures on Clinical Surgery, Vol. I. (1.), p. 30.

### (i) Seborrhœa

Skin disorders are liable to excite various phobias in sensitive anxious persons and these phobias often lead to aggravation of the disorder. For example, facial seborrhœa may establish a Circle in the following way :

> "In some chloranæmic and neurasthenic individuals, men and women, facial seborrhœa appears in the form of oily, sweaty drops upon the nose and forehead, not alone after overheating, but also suddenly, as the result of nervous excitement. This Vicious Circle may lead to considerable mental depression, inasmuch as the patients devote their entire attention to this condition, imagine themselves scrutinized by everyone, and dread intercourse with others." [1]

### (j) Acarophobia

Another illustration is sometimes presented by neurotic patients who have suffered from scabies and who decline to believe themselves cured. Any trifling dermatitis caused by the local application arouses such apprehension that they unwisely persist in the treatment and only aggravate their trouble. The neurosis is in fact a monomania in

[1] Kaposi, Diseases of the Skin, tr. by Johnston, p. 123.

which exaggerated fears lead to a treatment which aggravates the disorder.

> "The patient has been cured of his scabies by means of sulphur, but at the cost of an artificial epidermatitis which he mistakes for the original disorder and continues to treat by the same irritating applications . . . which have produced the artefact. A Vicious Circle is now set up. The more strongly convinced the patient is that he is suffering from scabies, the more vigorously he applies the sulphur ointment. The greater the irritation thus produced, the more he scratches himself, the more he is convinced of his scabies and the more he turns away from the only treatment that could cure him."[1]

[1] Sabouraud, Entretiens Dermatologiques, p. 381.

# Chapter Eight

## ARTIFICIAL CIRCLES

IN no disorder is there a greater risk of artefacts than in neurasthenia, the reason being that this condition is so commonly associated with diminished self-control, and with exaggerated fears of imaginary ills, especially with some form of nosophobia. Various illustrations of such artefacts have been given in previous Chapters. But it is desirable to draw attention to some further examples resulting from the injudicious use of stimulants, narcotics and other drugs, as well as from medical treatment.

### (a) Alcoholism

A common Circle arises when over-indulgence in alcohol is associated with feelings of misery and depression, which provoke further indulgence (Plate III. a). Müller thus describes the condition :

> " Indulgence in alcohol is liable to be followed by a sense of despondency, which provokes to further excess, and thus establishes a Vicious Circle from which the victim is unable to escape." [1]

[1] Handbuch der Neurasthenie, p. 255.

Tuke also refers to it :

> " In a neurasthenic individual a stimulant gives temporary relief, but leaves the neurasthenia as it is, or even increases it, and afterwards the neurasthenia causes an irresistible desire for the stimulant which, while it gave relief, aggravated the disorder. Therefore the substances in question cannot be considered as the only causes of the disorders mentioned, but they form a secondary link in the Vicious Circle, which always in pathology plays such an important rôle, the primary link being the morbid constitution." [1]

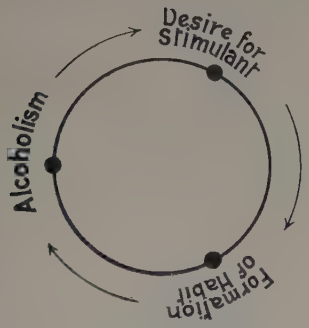
### (b) Narcomania

Another group of artefacts is associated with the abuse of narcotics such as morphia, bromides and chloral, since these drugs create an appetite for further indulgence, and perpetuate the nervous loss of balance so general in neurasthenia (Plate III. b).

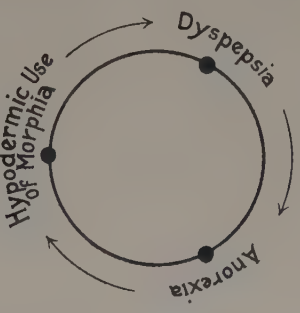
Curschmann thus describes this Circle :

> " Morphia has the disagreeable characteristic that its prolonged use establishes a habit which requires ever increasing doses in order to produce the similar effect. Moreover when continued, it gives rise to unpleasant and even serious disorders, if there is temporary abstention from the drug, which disorders can only be removed by a fresh dose of morphia.
>
> As long as the physician carries out the injections, the phenomena due to use and to abstention can be controlled and kept within bounds. But when once the patient begins to use the syringe, at first in order to subdue pain, and afterwards to obtain the euphoria induced by the morphia, the Vicious Circle is closed. For this Circle leads to ever increasing injections, and hence to the phenomena of chronic morphinism." [2]

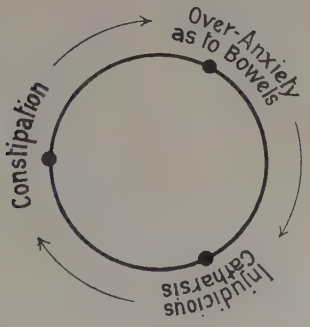
[1] Dictionary of Psychological Medicine, *s.* Neurasthenia.
[2] Lehrbuch der Nervenkrankheiten, p. 903.



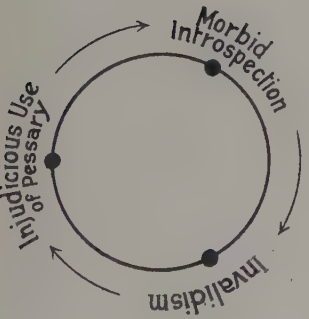

(a) Alcoholism



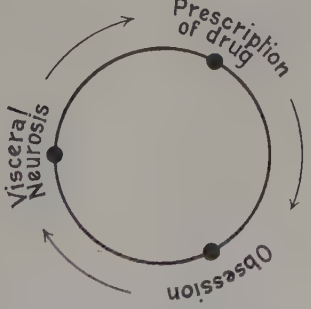

(b) Morphinomania




(c) Abuse of Cathartics




(d) Abuse of Pessaries




(e) Abuse of Drugs

## Plate III.—Artificial Circles

Fleury also writes :

> " Alcoholism and morphinomania are complicated by the same Vicious Circle. Abstinence causes misery which is only relieved by further indulgence, and this in its turn perpetuates and before long aggravates the misery." [1]

Very similar correlations may be caused by addiction to cocaine and other sedatives whose use leads to habituation and to volitional paralysis.

### (c) Nicotinism

In susceptible persons tobacco creates a somewhat similar Circle by arousing a desire for further indulgence and diminishing self-control.

> " Tobacco is said to soothe irritability without stimulation ; but it leaves in many persons long depression, coupled, generally, with an appetite for renewed indulgence in it, which proves intense." [2]

### (d) Abuse of Purgatives

The injudicious use of aperients may give rise to injurious correlations, especially in sensitive introspective persons. Such persons get into the habit of closely watching their stools, and in the event of any departure from the normal appearance or quantity, fly to quack aperients. Such indiscriminate drugging however irritates their digestive tract, depraves their secretions and provokes a

[1] La Médecine de l'Esprit, pp. 344, 351.

[2] *Asclepiad*, 1884, p. 76.

condition which but too often excites to further purgation (Plate III. c).

> "Thus the practice proceeds in a Vicious Circle of habit from which the patient is rarely extricated without more or less injury to his future health." [1]

### (e) Abuse of Pessaries

An illustration of a Circle established by injudicious treatment is often met with in neurasthenic females, in whom the depressed general health has resulted in some minor local ailment, often a mere neurosis, connected with the reproductive system. There is then much danger of the disorder leading to needless and endless tinkering which keeps the mind directed to the sexual organs, creates an exaggerated self-consciousness, and often transforms the unfortunate patient into an incurable neuropath (Plate III. d). Cases are on record in which scores of pessaries have been used in endless succession to correct a slightly prolapsed, ante- or retro-verted uterus, which after all has remained *in statu quo ante*, while the senseless treatment has created a chronic invalidism. [2]

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[1] Sir Henry Holland, Medical Notes and Reflections, p. 100.

[2] An admirable description of this artefact is given by Clifford Allbutt in the Gulstonian Lectures for 1884. *Lancet*, 1884, Vol. I., p. 461.

Playfair refers to the condition :

> "In many instances over much and injudicious local treatment has, in my opinion at least, intensified and kept up the now dominating neurasthenic disorder. In a case under my care the patient may fairly be said to be suffering from pessary on the brain—so incessantly is she thinking of one or other of the seventy-nine different instruments which she has had inserted in the last few years." [1]

Similar injury has often been done by repeated curetting of the endometrium, by cauterisation of the cervix, or even by needlessly frequent vaginal examinations.

### (f) Abuse of Urethral Sounds

Much the same injury may result when neurasthenic men are subjected to some local treatment which tends to concentrate attention on a trivial disorder and thus creates varied phobias and auto-suggestions. Thus Frisch draws attention to the damage often done by the over-frequent use of urethral sounds and injections:

> "Many patients both by day and night concentrate their attention on morbid sensations in their urethra, until this becomes the pivot of their whole mental activity. In such neurasthenic cases the main object must be to divert their thoughts from the urethra. The use of sounds and injections is apt to aggravate instead of improving their condition." [2]

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[1] *British Med. J.*, 1882, Vol. II., p. 309.

[2] Die Krankheiten der Prostata, 1910, p. 77.

In such conditions there may be more harm done by the treatment than by the malady. *Plus a medico quam a morbo periculi.*

### (g) Nosophobia

The above-mentioned artefacts suffice to illustrate a common sequence of events in which a disorder associated with neurasthenia creates an obsession or a phobia which aggravates the primary symptom. The condition may be due to auto-suggestion or to hetero-suggestion. Thus the sufferer may himself forge his own chain of obsessions and phobias. Or such may originate in the excessive solicitude of relations or result from the omission of the medical attendant to explain that the disorder is due to a neurosis and not to organic disease. Even the prescribed treatment may suggest, or intensify belief in, organic disease and thus add fuel to the fire. Such artefacts may be associated with any form of neurotic disorder: especially common are they in visceral neuroses.

> "Under one or other of these influences the visceral disorder may in its turn excite fresh phobias which tend to maintain and even to aggravate the disorder. The neurasthenic thus comes to be involved in a Vicious Circle." [1]

[1] André-Thomas, Psychothérapie, p. 209.

# Chapter Nine

## THE BREAKING OF THE CIRCLE

A LARGE part of the *ars medendi* consists in interrupting reciprocally acting correlations. "At all costs the Vicious Circle that has been established must be broken through,"[1] says one teacher. "Let it be a cardinal principle of treatment to make an effort to interrupt Vicious Circles,"[2] says another. "If we break the Circle at one point we allow recovery to commence,"[3] says a third.

Every Circle is made up of what we may venture to term "dominant factors," the elucidation of which is a *sine qua non* if the Circle is to be broken.

Mathieu and Roux refer to their importance :

> "In the syndromes complicated by Vicious Circles, there are certain leading pathogenic factors which play a part of great importance."

And again :

> "An analysis of the semeiology will reveal the essential pathogenic forces constituting the disorder and its more or less complicated Vicious Circles. These master symptoms (*maitres symptômes*) and primary pathogenic factors will also supply the fundamental indications of treatment."[4]

---

[1] *British Med. J.*, 1912, Vol. II., p. 1459.

[2] Mitchell Bruce, Principles of Treatment, p. 263.

[3] *British Med. J.*, 1910, Vol. II., p. 1392.

[4] Pathologie Gastro-Intestinale, Series I. (1909), pp. 150, 151.

If the dominant factors can be relieved, the lesser and associated troubles will recede into the background.

It is beyond the purpose of this Volume to describe such treatment of neurasthenia as may be found in every textbook of medicine. But it will be useful to point out in some detail how a study of the Circle influences treatment, and supplies so to speak a compass by which the practitioner may steer his patient in a direct course for the desired haven.

The treatment of neurasthenia must never be undertaken without a sense of grave responsibility. Much harm has been done by injudicious therapeutics. Every failure injures the patient and aggravates the disorder.

As Jendrassik says :

> " When the physician does not treat neurasthenia with the necessary pathological insight . . . not only is the expected benefit not obtained, but the patient may actually receive severe injury to his *morale*." [1]

Especially is care necessary in the prescription of drugs.

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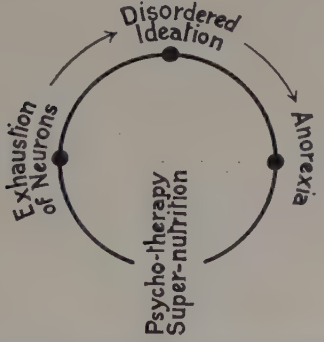
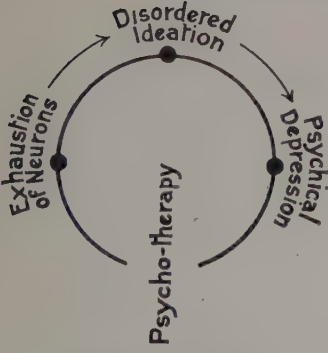
[1] Volkmann, Sammlung Klinischer Vorträge, 1906, Series XV., Innere Medizin, No. 128-9 (Ueber Neurasthenie), p. 658.

(a) Psycho-therapy

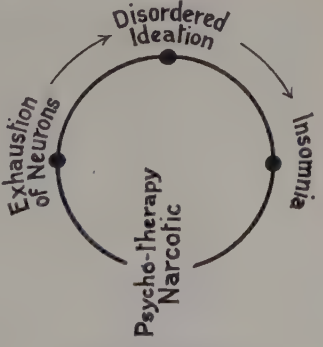
(b) Psycho-therapy




(c) Psycho-therapy Super-nutrition




(d) Psycho-therapy




(e) Psycho-therapy Narcotic

## Plate IV.—The Breaking of Psychical Circles

Ballet writes :

> " Without wishing to abolish treatment by medicines, I venture to say that, on the whole, more harm than good has been done by drugs both to those threatened by neurasthenia and to those already attacked." [1]

As a concrete example Wilkinson refers to the injury often done by cathartics :

> " The use of drugs requires clinical acumen, common sense and shrewd observation, lest the drugs make matters worse by establishing a still greater inhibition of the ordinary processes, digestive, muscular and nervous, upon which the regular and complete evacuation of the bowel depends. Such want of skill and care may establish a Vicious Circle, at one segment of which such severe and distressing conditions as membranous colitis, chronic catarrh, and even visceral neurasthenia may obtrude themselves." [2]

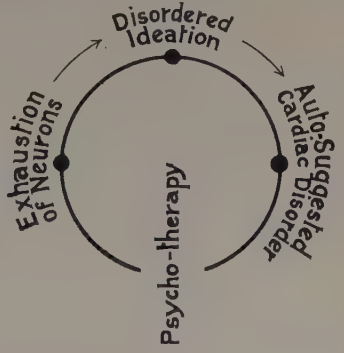
Much the same care is called for in initiating local treatment, more particularly in reference to the sexual system, as has been pointed out in Chapter VIII.

In the treatment of neurasthenia the main point of attack is the citadel itself, *i.e.* the central nervous system. The disorder arises from exhaustion of the neurons, and the Circle will not be permanently broken until their condition improves. Careful consideration is necessary as to the choice of treatment. Sometimes psychical measures will suffice. At other times nourish-

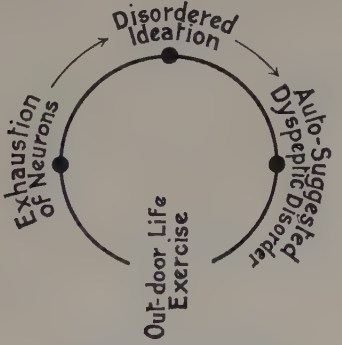
[1] Neurasthenia, tr. by C. Smith, p. X.

[2] *Practitioner*, 1910, Vol. I., p. 638.

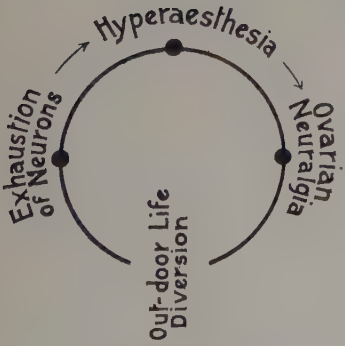
(a) Psycho-therapy




(b) Psycho-therapy




(c) Out-door Exercise




(d) Out-door Life, Diversion

(e) Laparotomy

**Plate V.—The Breaking of Somatic Circles**

ment and rest are the main requirements. There are also circumstances in which the outposts must be attacked. For it frequently happens that processes which in health do not affect consciousness, in neuropaths evoke painful sensations and affect consciousness, and so the process is kept up. In such cases the peripheral disorders which are completing the Circle must be treated.

Tuckey refers to such conditions when he says :

> "In neurasthenia and other functional diseases if we remove all the symptoms we cure the disease. Neurasthenia is at least half psychical in its causation and maintenance, and therefore demands psychical means for its cure. Many of the components of the Vicious Circle formed act directly as factors in keeping up the condition—for instance, the insomnia, the constipation, the atonic dyspepsia, the disturbance of the genital functions. These are in detail and collectively acted upon by suggestion to an extraordinary extent." [1]

We may now briefly discuss the plan of campaign. Each practitioner must select from his quiver such arrows as are most likely to hit the mark.

There are three lines of treatment by which we may seek to break the Circle, viz. (a) psychotherapy ; (b) constitutional treatment ; (c) local treatment. In many cases it will be desirable to utilise all the resources at our command.

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[1] *Practitioner*, 1911, Vol. I., p. 190.

### (a) Psychotherapy

First and foremost must be placed psychotherapy. As psychical disturbances will create, so psychical treatment may break, the Circle.

Dubois indeed holds that psychotherapy renders all other treatment unnecessary. This is an exaggeration, since no one remedy will cure such a protean disorder as neurasthenia. But in suitable cases psychical treatment proves a panacea and experts in its use sometimes meet with marvellous success (Plate IV. a-e).

Various Circles have been described above in which disordered ideation gives birth to subjective symptoms which are magnified by auto-suggestions and then in turn aggravate the disordered ideation. In such cases auto-suggestions must be met by counter-suggestions. If the ideas connected with symptoms can be driven out of consciousness the Circle will often be broken and the patient cured. Herein lies the value of the dominating personality of a trusted physician who can inspire the patient with implicit confidence that his nervous disorder is purely functional and is certainly curable. When this has been accomplished, a long stride towards recovery has already been taken. Phobias and auto-suggestions vanish ; self-confidence and the *joie de vivre* return.

The experienced physician will instinctively know at which psychical moment and by which psychical methods he can best open out the desired fresh outlook on life, substituting hope for despair, courage for timidity, resolution for vacillation.[1]

He who has the deepest insight into mental processes, who can read the secret thoughts and emotions of his patient and who has the force of character that compels assent will most often be victorious. It is to such cases that Strümpell refers when he says :

> "It is true of all neurasthenic conditions that they are cured not by physic but by the physician."[2]

In some cases recovery may be instantaneous. In others a powerful mental persuasion of rapid recovery must be maintained for some time. Frequently the blessing flows through extra-medical channels. The so-called miracles occurring at holy wells and shrines, or effected by Christian science, Matteism, electric belts, etc., are so many examples of psychotherapy.

---

[1] Schofield complains that there is as yet no adequate instruction in mental therapeutics : " This science is nowhere systematically taught, and so cause and effect form a Vicious Circle. The Vicious Circle is a familiar phenomenon in hysteria. In this case an important subject is not taught because surrounded by fraud, and it is surrounded by fraud, because it is not taught." Unconscious Therapeutics, p. 244.

[2] Text-book of Medicine, Vol. I., p. 572.

It is well, however, to recognise that the restoration of exhausted nerve centres is usually a difficult task, since in their condition of irritable weakness those centres discharge their energy under trifling provocation and every such discharge prolongs the weakness. Every attack of terror, every failure to carry out a task, increases the instability of the nerve centres.

The most obstinate cases are those in which earlier treatment has been a failure. As Jendrassik says :

> "Jede erfolglose Kur wirft ihren Schatten auf die folgenden Versuche." [1]

It is well, therefore, to select the line of treatment with the utmost care and to carry it out with all available driving force.

### (b) Constitutional Treatment

Although psychotherapy may bring instant relief, the primary disorder is as a rule not permanently cured. Apart from the symptoms, there remains the background of the irritable weakness of the neurons, and for this systematic or constitutional treatment is generally required. Happily it is often successful in curing both the general and the local disorder which are perpetuating each other.

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[1] Volkmann, Sammlung Klinischer Vorträge, 1906, Series XV., Innere Medizin, No. 128–9 (Ueber Neurasthenie), p. 691.

## Rest and Nutrition

Some striking Circles have been described above in which the neurasthenia is associated with loss of appetite and emaciation. These are the essential dominant factors.

Such a condition is best remedied by carefully regulated rest and nutrition. If the arrested processes of assimilation and nutrition can be once again stirred into normal activity, the starved neurons will in their turn resume their wonted control over the processes of digestion. The rest is helpful in diminishing the physiological output and promoting the accumulation of adipose tissue.

As Mathieu and Roux say :

> " Rest in the horizontal position and suitable alimentation are the two measures that are most often required to break the Vicious Circles associated with neurotic gastro-intestinal dyspepsia." [1]

A more radical *régime* is required in those forms of anorexia nervosa as are sometimes met with in nervous introspective women. Here all inclination for food vanishes, and the progressive emaciation may reduce the sufferer to little more than skin and bones. The brain and the digestive organs reciprocally starve each other. Moreover over-anxious and over-sympathetic friends do harm by fostering unwholesome auto-suggestions (Plate IV. c).

[1] Pathologie Gastro-Intestinale, Series I. (1909), p. 151.

It was the genius of Weir Mitchell that enabled him to analyse this Circle and to devise his well-known method of breaking it by the five factors of isolation, rest, massage, electricity and super-nutrition.

The injury done by injudicious friends who rivet the patient's attention on her aches and pains, and aggravate the neurosis by indulging every whim and fancy, is remedied by removing the patient from an injurious environment into an atmosphere of hopefulness and courage. This step is of itself of great value, for as Purves Stewart well says :

> "If the craved for sympathy is shown, . . . her recovery may be indefinitely delayed. Hence it is generally of supreme importance to remove the hysterical patient completely from her old surroundings, and to isolate her until the Vicious Circle is broken." [1]

The rest in bed restricts the expenditure of nerve force and diminishes the exports of the organism, thus allowing the assimilated nutriment to be utilised for the accumulation of a reserve.

The massage of the muscles and their contractions by means of electricity promote abundant tissue waste and pave the way for active assimilation.

---

[1] The Diagnosis of Nervous Diseases, p. 344.

The supply of digestible food in regular and abundant quantities nourishes the whole system including the nervous system. The whole *régime* is carried out with the minimum expenditure of nerve force on the part of the patient, its beneficial effect being proved by a rapid increase of weight. In fact as a cumulative result of these measures many apparently hopeless cases of anorexia nervosa are permanently cured, and confirmed bed-ridden querulous invalids are transformed into fine specimens of womanhood.

### Exercise and Diversion

Another group of Circles met with in neurasthenia are best broken by a holiday combined with a judicious amount of exercise. Such a line of treatment is generally helpful in cases of overwork complicated by brain-exhaustion, headache, dyspepsia and insomnia, and also in many cases where emotional troubles are associated with melancholy (Plate IV. d). Change of scene and exercise are among the best means of withdrawing blood from the over-taxed centres. The selection of the best holiday and form of exercise requires much judgment on the part of the physician. A foreign cruise, a Swiss tour, a visit to a Spa or other health-resort may all be successful in interrupting the reciprocal correlations. The aim should be to select such a fresh environment as will avoid injurious psychical influences, promote sleep and

nutrition, and increase self-control. Care is also required in prescribing the form and amount of exercise. Each case needs individual consideration ; but as a rule exercise should stop short of fatigue, at any rate of such a degree of fatigue as is not rapidly thrown off.

### Drugs

Much caution is necessary in resorting to drugs, for an incalculable amount of harm has been done by their use. The danger lies in the tendency of drugs to foster a belief that there is physical illness, whereas the physician can render his patient no greater service than by freeing his mind of such a notion. And yet in suitable cases they will often render service, some by their tonic action, others by calming the irritable nerve centres.

In all cases drugs must be kept in subservience to the moral treatment ; their chief value lies in suggestion, in aiding other psychical measures. The innumerable drugs that have at various periods been fashionable testify to their small value. Strychnine, quinine, arsenic, valerian, iron have all been eulogised as specifics by some physicians and repudiated by others. No one

drug is universally useful. That physician will be most successful who possesses the art of using his drugs as a means of encouraging and soothing his patient, of maintaining a strong conviction of ultimate recovery and of diverting his thoughts from his troubles.

### Relief of Insomnia

Insomnia is so frequently a dominant factor in neurasthenia as to deserve special consideration. Frequently it is a result of mental excitement, especially of worries and obsessions, and is best treated by means of suggestion. Narcotics and hypnotics are two-edged tools and as a rule perpetuate the want of courage and self-control to which the insomnia is so largely due (Plate IV. e). The more the centres of volition are enfeebled, the greater the risk. Narcotics therefore should only be prescribed with the greatest circumspection and as temporary adjuncts to the main treatment.

There are, however, forms of exaggerated irritability in which narcotics are found indispensable.

As Mitchell Bruce says :

> " Rest is urgently indicated for all cases of this kind and has to be secured in many instances by means of morphine which breaks the Vicious Circle of unrest and irritability ; and a beginning once made, rest begets rest." [1]

[1] Principles of Treatment, p. 230.

When the insomnia is due to psychical restlessness, the Circle may sometimes be broken by forcing the attention into fresh channels. The associated hyperæmia is often checked by a short brisk walk just before bed-time, by a hot general or foot bath, by some means of counter-irritation or by general massage. Psychotherapy is of immense service in such cases of insomnia. Its potency is well illustrated by a Curschmann's case of a hysterical woman who used only to sleep for about 2 hours after large doses of the strongest narcotics. A small injection, however, of "nihilin" (distilled water) sent her to sleep for a whole night.

### (c) Local Treatment

There remain some Circles which neither psychotherapy nor systematic treatment succeed in breaking. The local disorder may have taken so firm a foot-hold, the prolonged gyration may have so deepened the furrow, that local remedies must be used. Let the physician, while keeping in perpetual remembrance the dangers of local treatment, be prepared to use every dynamogenic agent in his armamentarium (Plate V. a-e).

## Depuration

A common condition associated with neurasthenia is a chronic toxæmia due to imperfect metabolism and an accumulation of fatigue products. This dominant factor is both a cause and a result of poisoning of the neurons.

Depurative measures must be used to eliminate the accumulated toxins and restore to normal activity those cellular activities that are indispensable to healthy regulation of nervous force. Constipation and atonic dyspepsia are some results of the toxic condition which must receive attention.

In many visceral disorders the process of depuration may be combined with suggestion by a residence of some weeks at a suitable Spa. Change of air and scene will add their effect to the use of aperient waters.

In addition to prescribing suitable remedies, it is important to explain to the patient the purely functional nature of his sufferings, and to distract his attention from them. If the Circle can be broken at one point, recovery will commence.

> "By degrees the dyspepsia diminishes; the local improvement encourages the sufferer and this acts beneficially on his general health. His *morale* improves and in its turn exercises a favourable reaction on the local disorder. The Vicious Circle is broken." [1]

[1] André-Thomas, Psychothérapie, p. 272.

## Relief of Pain

Pain associated with some local disorder so often establishes reciprocal correlations that its removal is of great importance ; especially is this the case when pain is combined with insomnia.

Cushny emphasises the importance of this Circle :

> " Pain and sleeplessness in themselves lead to exhaustion, and in relieving these symptoms we may break a Vicious Circle in which the disease causes sleeplessness, and this leads to exhaustion and thus promotes the further development of the disease." [1]

The means of removing pain are as varied as the causes of pain. Careful elucidation of the source of pain will suggest the remedy.

## The Use of Surgical Appliances

It is remarkable how trivial ailments may at times arouse imposing reactions where there is a neuropathic taint. Happily such reactions are sometimes cut short by simple means. Even a giant may be slain by a pebble from the brook. The principle of treatment is thus summed up by Clifford Allbutt :

> " In neurasthenics a local ill, acting and reacting thus, establishes a short circuit and a Vicious Circle ; and the local ill must be at once readjusted." [2]

---

[1] *British Med. J.*, 1905, Vol. II., p. 1004.

[2] Allbutt and Rolleston, System of Medicine, Vol. VIII., 755.

Such local ills may often be cured by simple surgical appliances. A well-adjusted pessary, an elastic bandage, a belt for floating kidney, a suitable corset, a set of artificial teeth may all be the means of breaking the Circle, especially when supplemented by moral treatment.

The Circle associated with eye-strain is often broken by an artificial lens. A dioptre of even one-eighth may interrupt the reciprocally acting sequences that have been rendering life a burden.

### Surgical Operation

Some Circles can only be broken by surgical interference. Amongst such may be mentioned conditions which involve excessive drain on the system as menorrhagia due to a fibroid, toxæmia due to intestinal stasis, chronic pain associated with continual valetudinarianism such as may arise from a movable kidney or a prolapsed congested ovary. In all these and many similar cases where a definite local lesion has provoked serious neurotic complications, the aid of surgery may be needed to break the Circle.

But such cases must be carefully distinguished from another group, in which some trifling local lesion is merely a secondary result of the neurasthenia. Here the local treatment may be highly prejudicial and aggravate the general ill-health. All-important is it to divert attention from the local discomfort and to improve the general health.

In such cases the neurosis is the real disorder and local congestions, perverted secretions and sensory disturbances are the effects or symptoms, not the cause of the disease. The physician must grapple with the neurosis first, whatever he may do with the local condition afterwards.

### The Importance of Early Treatment

Lastly a word must be said as to the value of attacking neurasthenia as soon as symptoms show themselves. Early treatment, important in every department of medicine, is more important than ever where the establishment of a Circle is threatened.

> "It is the little rift within the lute
> That by and by will make the music mute."

Functional shortcomings should be remedied at the earliest moment, lest they become habitual and thus gain strength. Impaired nutrition, defective metabolism, insufficient elimination, inadequate sleep and exercise should all receive attention, especially where there is a neuropathic tendency. Auto-suggestions are the harder to abolish, the longer they have lasted ; the more liable too are they to pervert ideation. Every

gyration deepens the groove ; only too often does disease resemble "a Circle in the water that never ceaseth to enlarge itself."

Let the physician ever bear in mind the time-honoured precept of Ovid :

*Principiis obsta.*

# Chapter Ten

## CONCLUSION

ALTHOUGH numerous Circles associated with neurasthenia have been described in the previous Chapters, I have far from exhausted the subject. For the principle of reciprocal action and reaction is so inextricably interwoven in warp and woof with pathological processes that as our knowledge of these increases, so will fresh illustrations be discovered.

It is a remarkable feature of neurasthenia that so many of its manifestations aggravate the primary disorder. The stage of beneficent reactions, as pointed out in the Introduction, is rapidly replaced by one in which both psychical and physical reactions intensify the primary disorder. Hence the chronic progressive character of the malady ; hence it is that *natura medicatrix* accomplishes so little.

Strange that so little attention has hitherto been directed to this self-perpetuating factor in disease ! Primary reactions are the common-places of our

text-books. But the reciprocal influence of those reactions on the primary disorder is scarcely thought worthy of consideration. And yet those reactions are of immeasurable significance as regards the evolution, progress and termination of disease. There is much need for a Text-book of Therapeutics based on the principle that the *ars medica* mainly consists in "breaking the Circle," and intended to guide the practitioner in his search for the dominant factors and in his attack on the *locus minoris resistentiæ*.

Meanwhile the philosophic physician who duly studies the operations of the Circle will find his horizon widened. His further prospect will assist him in steering his patient safely to the desired haven. True, he will discover that the famous Hippocratic dictum :

νούσων φύσεις ἰητροί [1]

is usually a delusion so far as neurasthenia is concerned. But he can triumphantly reply :

τεχνῇ κρατοῦμεν ὧν φύσει νικώμεθα [2]

[1] "Nature is the healer of diseases."

[2] "Art triumphs where Nature fails."

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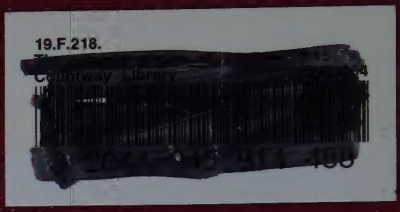
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